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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/632,741	08/01/2003	John Frederick Ackerman	RD-26408-5	3858
7590 03/04/2009				
John S. Beulick Armstrong Teasdale LLP Suite 2600 One Metropolitan Square St. Louis, MO 63102				
EXAMINER PERRIN, JOSEPH L				
ART UNIT 1792		PAPER NUMBER		
MAIL DATE 03/04/2009		DELIVERY MODE PAPER		

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary

Application No.

10/632,741

Applicant(s)

ACKERMAN ET AL.

Examiner

Joseph L. Perrin, Ph.D.

Art Unit

1792

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 22 February 2009.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 18-23 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 18-23 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☐ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO/SE/US)
Paper No(s)/Mail Date _____
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date _____
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: _____

DETAILED ACTION

Continued Examination Under 37 CFR 1.114

1. A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on 02 February 2009 has been entered.

Response to Arguments

2. Applicant's arguments filed 02 February 2009 have been fully considered but they are not fully persuasive.
3. In view of applicant's amendment and arguments associated therewith, the rejections under §§ 112, first and second paragraphs, and 35 USC § 102 have been withdrawn. However, the rejections under 35 USC § 103 still remain albeit for different reasoning necessitated by the newly added structural configuration of the nozzles.
4. Regarding the §103 rejection over BARTOS in view of BECK or MCDERMOTT, applicant argues that BECK teaches away because BECK cleans a turbine by spraying downstream of a compressor. This is not persuasive because this is not the teaching of BECK relied upon for the rejection. Rather, BECK is relied upon solely for the teaching that it is known that gas turbines comprise a compressor. A prior art reference must be considered in its entirety, i.e., as a whole, including portions that would lead away from

the claimed invention. *W.L. Gore & Associates, Inc. v. Garlock, Inc.*, 721 F. 2d 1540, 220 USPQ 303 (Fed. Cir. 1983), cert. denied, 469 U.S. 851 (1984). Thus, whether or not BECK teaches cleaning upstream or downstream of the compressor is irrelevant to the Examiner's combination. Regarding MCDERMOTT, the only argument presented is directed to the newly added language of the nozzles being "substantially co-planar". Since this limitation is not yet under a rejection, any rejection(s) over MCDERMOTT necessitated by the instant amendment will be properly addressed in the forthcoming rejection(s).

Claim Rejections - 35 USC § 103

5. The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.
6. Claims 18-23 are rejected under 35 U.S.C. 103(a) as being unpatentable over BARTOS in view of BECK or U.S. Patent No. 5,273,395 to MCDERMOTT.

Regarding claim 18, BARTOS discloses the claimed combination of a gas turbine engine (inherently or implicitly comprising a compressor, such being an old and well known component of a gas turbine engine) and a washing system for a gas turbine engine (10) comprising a pump (14) to pump liquids through a ring manifold (96) having plural circumferentially-spaced spray nozzles (substantially co-planar with said ring) operable (i.e. via a controller and/or valves) to discharge a liquid radially inward (i.e. horizontally) into the turbine engine to be treated, and a controller (26) configured to inject plural liquids from fluid reservoirs (18/20/22/24) (see Figures 1, 2, 6, and relative

associated text). Re claim 19, BARTOS further discloses the use of a starter motor to rotate the engine while spraying a treatment liquid (col. 1, lines 27-28 & claim 1).

Re claims 20 & 22, BARTOS discloses the claimed structure of a washing system (10) for a gas turbine engine including a ring manifold (96) having plural circumferentially-spaced spray nozzles operable (i.e. via a controller and/or valves) to discharge a liquid radially inward (i.e. horizontally) into the turbine engine to be treated, and a controller (26) configured to inject plural liquids from fluid reservoirs (18/20/22/24) (see Figures 1, 2, 6, and relative associated text). It is noted that the intended use of the liquid is not afforded patentable weight and does not provide a structural limitation to the claimed apparatus. The examiner notes that for claim 22, the action of the liquid (i.e. one that "coats") is intended use and does not serve to structurally distinguish as generally all liquids are capable of coating to some degree. Re claim 21, BARTOS discloses controlling the sequence of the liquid treatments (col. 1, lines 39-41 & 59-62). Re claim 22, BARTOS further discloses the use of a starter motor to rotate the engine while spraying a treatment liquid (col. 1, lines 27-28 & claim 1). Re claim 23, BARTOS further discloses the use of a starter motor to rotate the engine while spraying a treatment liquid (col. 1, lines 27-28 & claim 1).

BARTOS discloses using the claimed washing system in combination with a gas turbine engine and the position is taken that one having ordinary skill in the art would reasonably interpret the disclosed gas turbine engine as a conventional gas turbine engine including a compressor, either inherently or implicitly, particularly since it is common knowledge that compressors are part of a conventional gas turbine engine and necessary for operation. However, even if assuming *arguendo*, one were to construe

the gas turbine compressor of BARTOS as not having a compressor, both BECK and MCDERMOTT are directed to cleaning a gas turbine engine and evidence that conventional gas turbines comprise a compressor.

Because the gas turbine engines of BARTOS, BECK and MCDERMOTT are structural equivalents readily recognized by one having ordinary skill in the art, the position is taken that simply substituting the known gas turbine engine of BARTOS for the structural equivalent gas turbine engines of BECK or MCDERMOTT in the combination of a gas turbine engine and ring manifold cleaning system would have yielded the same predictable result of cleaning/treating a gas turbine engine with compressor using a spray ring manifold.

Regarding the nozzle configuration, BARTOS discloses a ring manifold with substantially co-planar nozzles configured to spray cleaning fluid into the gas turbine inlet but does not expressly disclose the nozzles oriented to discharge the cleaning fluid radially inward and substantially co-planar with said nozzles. Both BECK and MCDERMOTT teach that it is known to provide a spray ring manifold with nozzles angled radially inward (see BECK and MCDERMOTT cited above) and MCDERMOTT expressly discloses spraying radially inward to create a more uniform intake of cleaning fluid into the engine during a cleaning operation (see entire document of MCDERMOTT, particularly the abstract). Therefore, it would have been obvious to one having ordinary skill in the art at the time the invention was made to rearrange the nozzle angle of BARTOS radially inwardly for the purpose of creating a more uniform intake of cleaning fluid into the engine during a cleaning operation, since it has been held that rearranging parts of an invention involves only routine skill in the art. *In re Japikse*, 86 USPQ 70. It

is noted that the record is silent with respect to any unexpected or unpredictable results of the radial inward angle, and no such results are apparent on this record.

Conclusion

7. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Joseph L. Perrin, Ph.D. whose telephone number is (571)272-1305. The examiner can normally be reached on M-F 8:00-4:30.
8. If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Michael E. Barr can be reached on (571)272-1414. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.
9. Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Joseph L. Perrin/
Joseph L. Perrin, Ph.D.
Primary Examiner
Art Unit 1792